

PROCESS STREAM CONDENSATE RECYCLE METHOD
FOR A STEAM REFORMER

ABSTRACT

A method of recycling process stream condensate from a steam reforming system that produces an uncontaminated superheated steam stream and one or more process condensate streams formed of condensate condensed from a water containing product stream that is also produced by the steam reforming system. The process condensate stream is collected and formed into a contaminated condensate stream. The contaminated condensate stream is then pressurized and heated with a first part of the uncontaminated superheated steam stream to form a contaminated superheated steam stream and an uncontaminated condensate stream. A second part of the uncontaminated superheated steam stream is combined with the contaminated superheated steam stream to form a combined superheated steam stream that is used as a source of steam for steam reforming. The uncontaminated condensate stream is recycled as make up for the uncontaminated superheated steam stream. In such manner, contaminated process condensate is reused and uncontaminated steam is available for export.